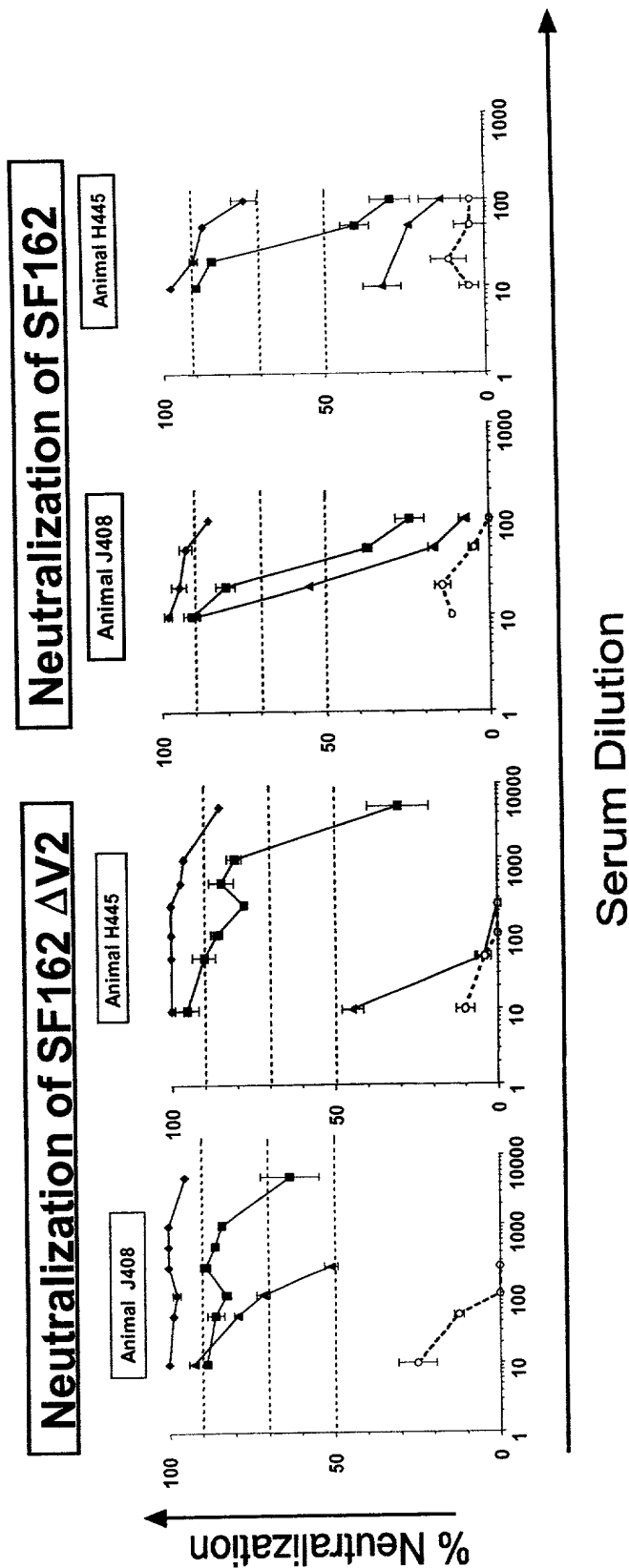
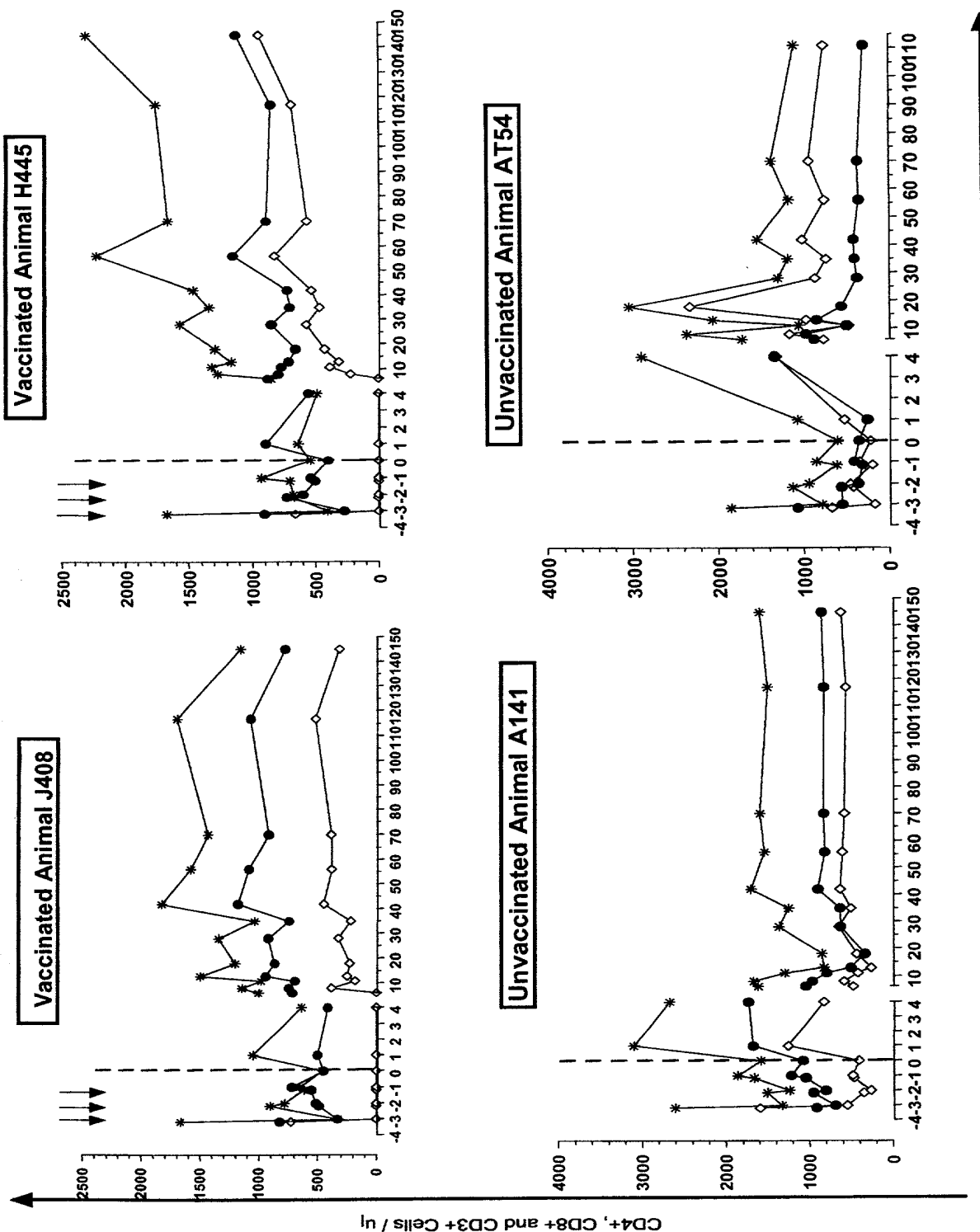


2570-1-001N FIGURE 1



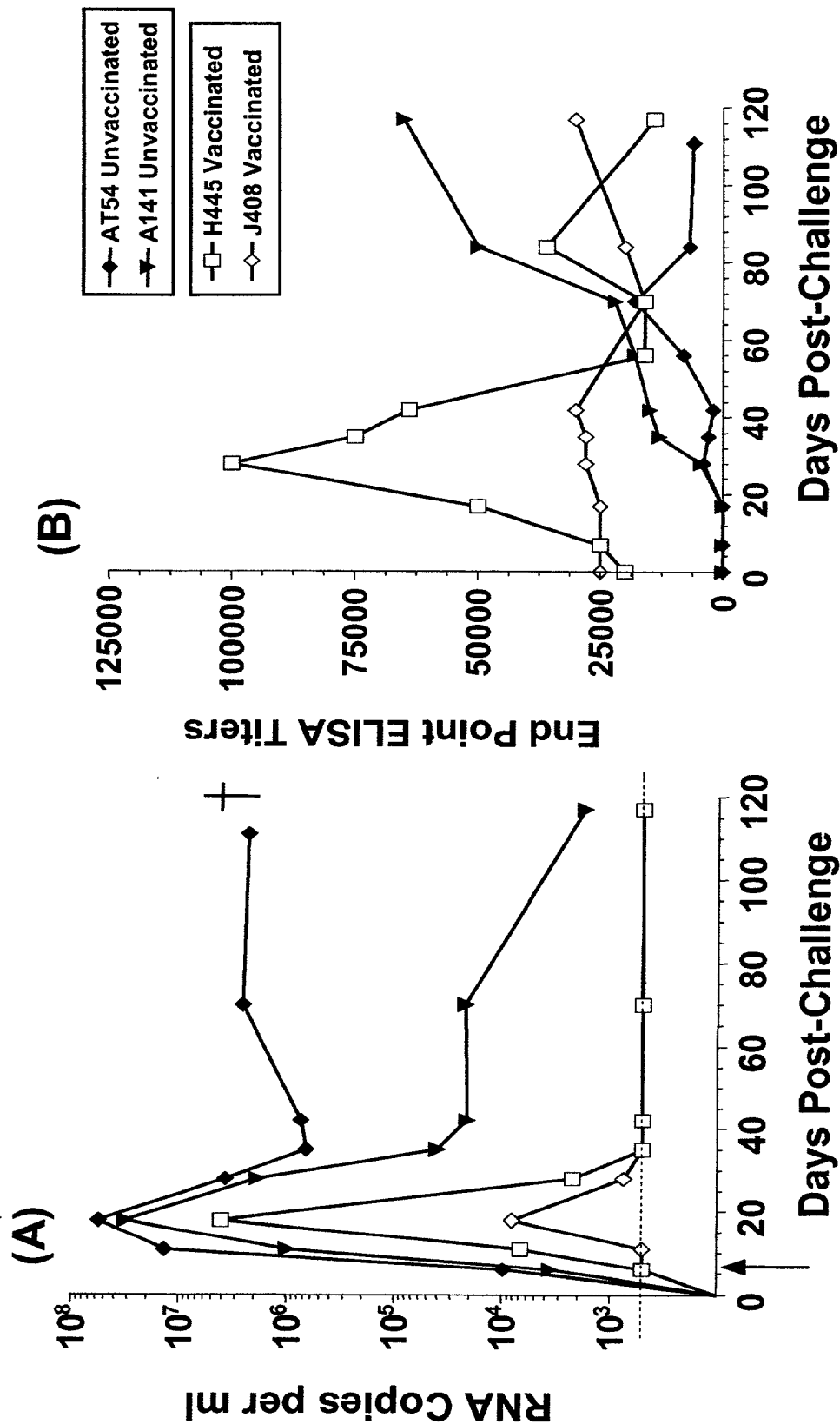
2570-1-001N FIGURE 2

2570-1-001N FIGURE 3

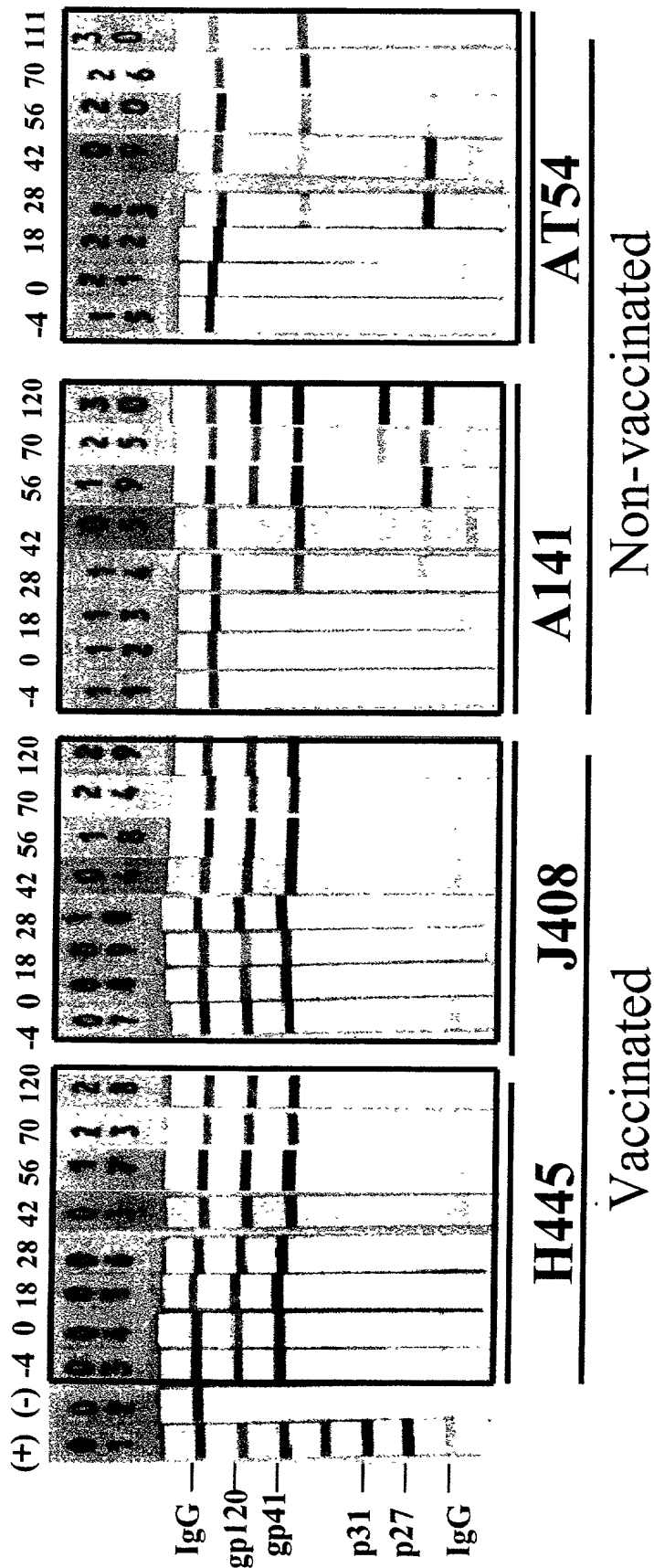


Days Post-Challenge

2570-1-001N FIGURE 4



Seroconversion to SIV-gag/pol and HIV env Antigens

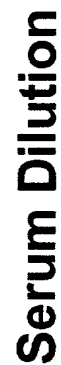


Immunized with SF162gp140

End-Point ELISA Titers against the $\Delta V2gp140$ Protein

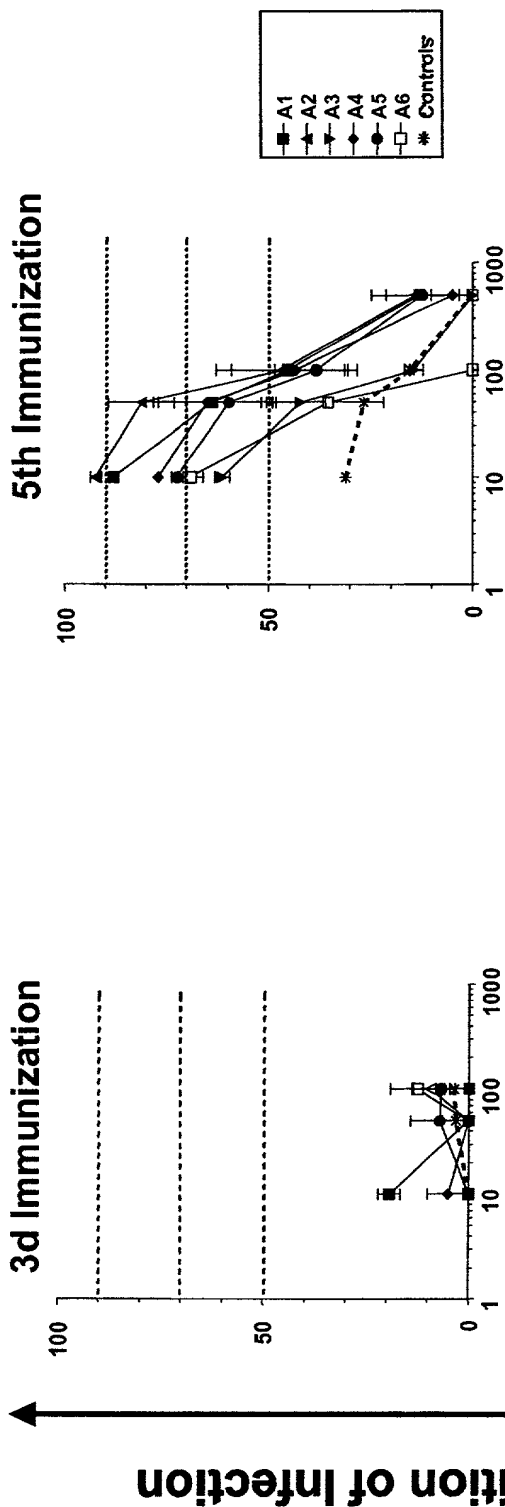
Weeks Post-Immunization

Weeks Post-Immunization	Series 1 (Diamonds)	Series 2 (Squares)	Series 3 (Triangles)	Series 4 (Circles)	Series 5 (Squares)
0	$10^6.5$	$10^6.2$	$10^6.0$	$10^5.8$	$10^5.5$
10	$10^3.2$	$10^3.0$	$10^2.8$	$10^2.6$	$10^2.4$
20	$10^2.8$	$10^2.6$	$10^2.4$	$10^2.2$	$10^2.0$
25	$10^2.5$	$10^2.3$	$10^2.1$	$10^1.9$	$10^1.7$

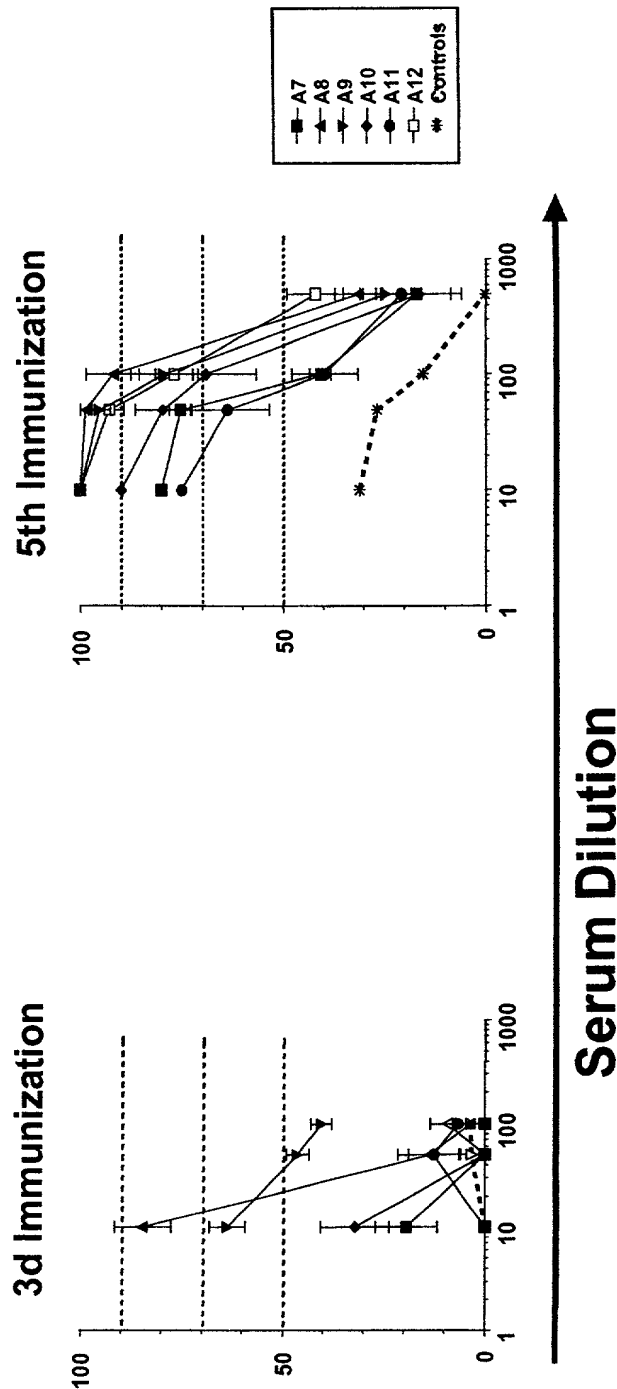


2570-1-001N FIGURE 7B

Animals Immunized with SF162gp140

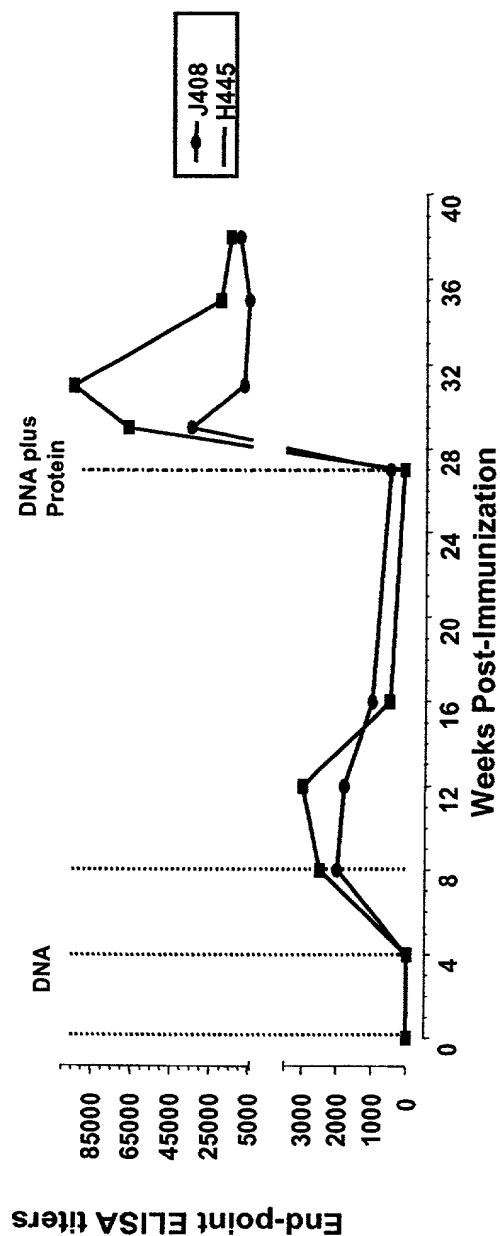


Animals immunized with $\Delta V2gp140$

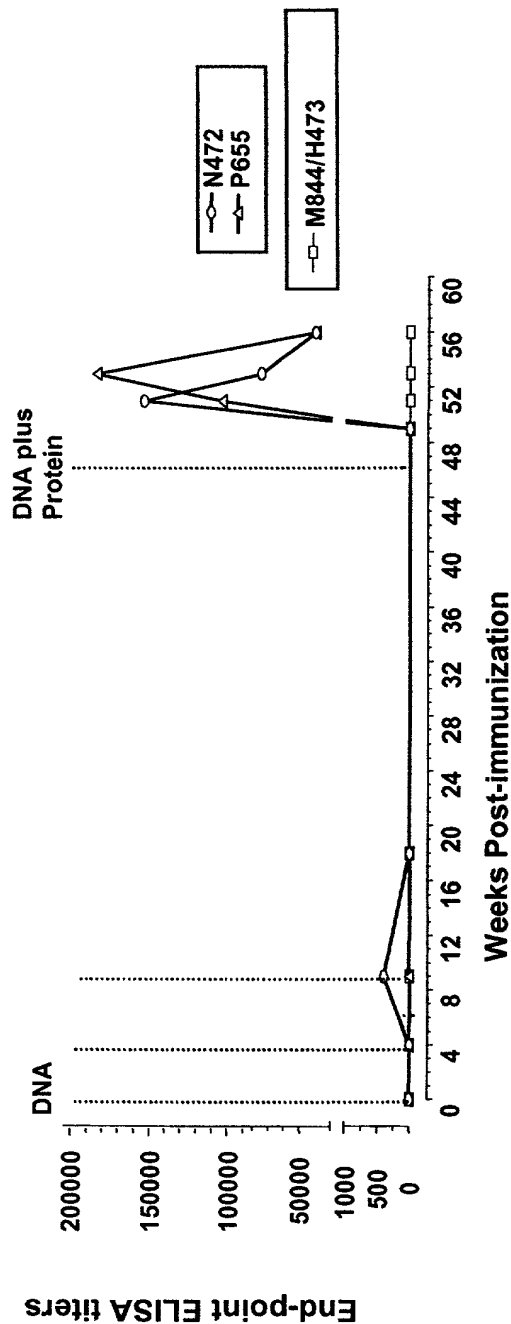


2570-1-001N FIGURE 8

Immunization with the modified Δ V2gp140 immunogen

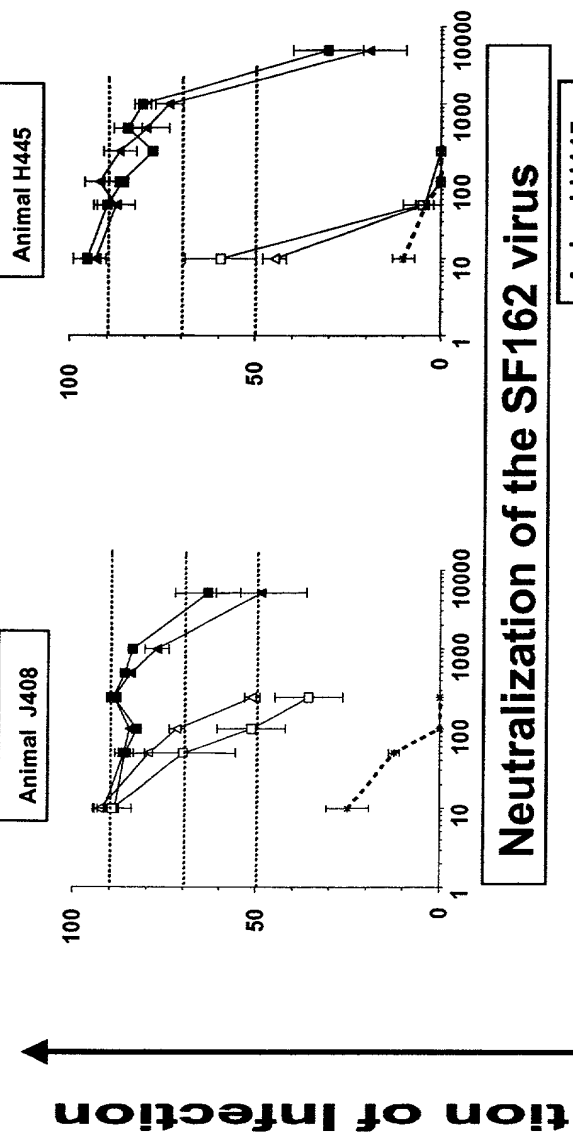


Immunization with the unmodified SF162gp140 immunogen

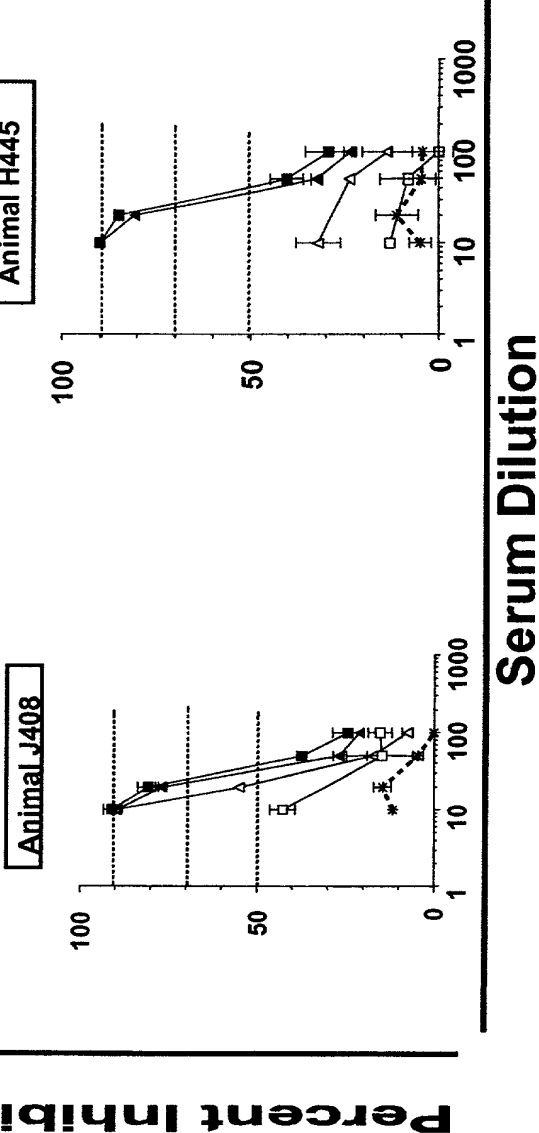


2570-1-001N FIGURE 9A

Neutralization of the SF162 Δ V2 virus



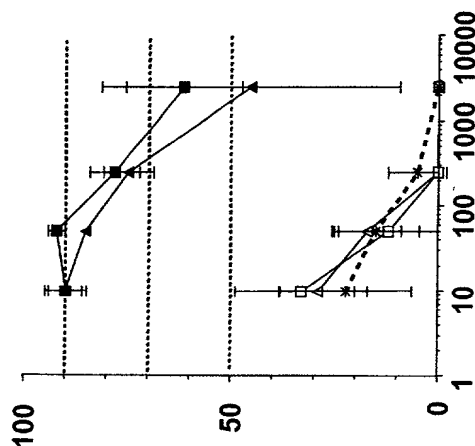
Neutralization of the SF162 virus



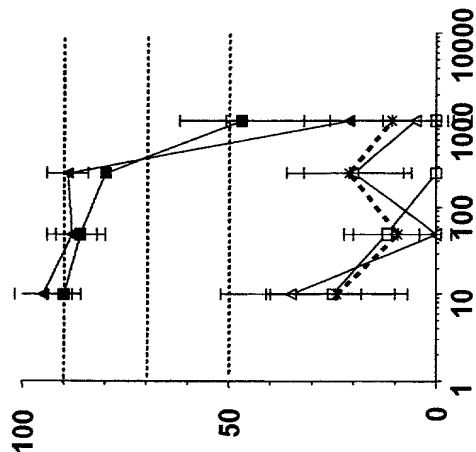
2570-1-001N FIGURE 9B

Neutralization of the SF162ΔV2 virus

Animal N472

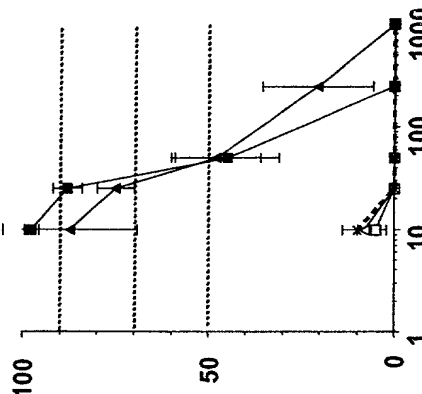


Animal P655

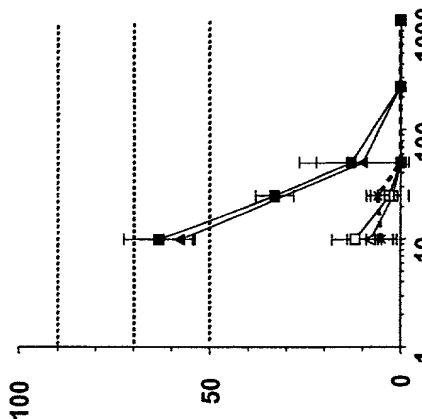


Neutralization of the SF162 virus

Animal N472



Animal P655



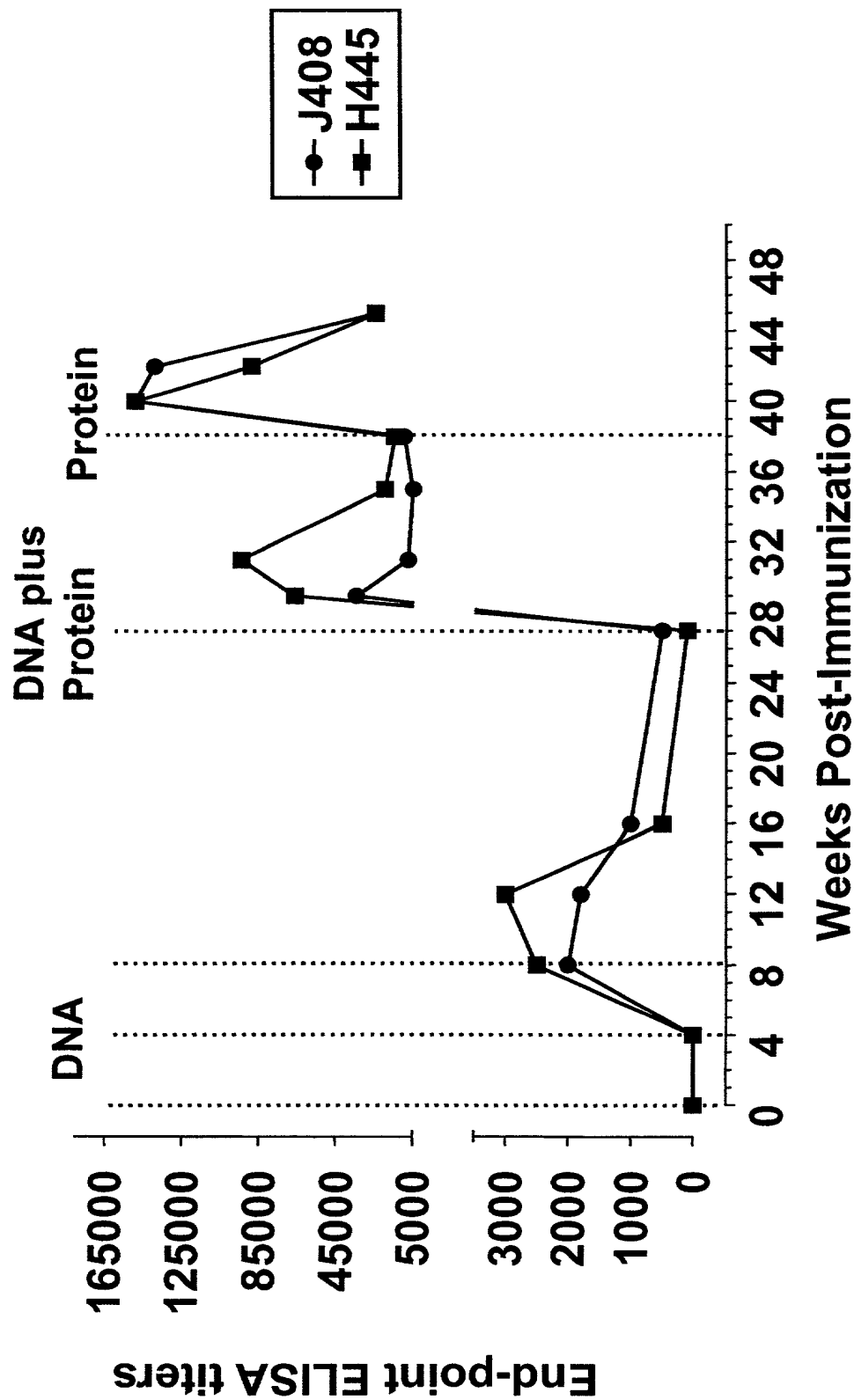
- * Pre-bleeds
- 2nd DNA
- △ 3d DNA
- ◆ 2 weeks post boost
- ▲ 4 weeks post boost

Serum Dilution

Percent Inhibition of Infection

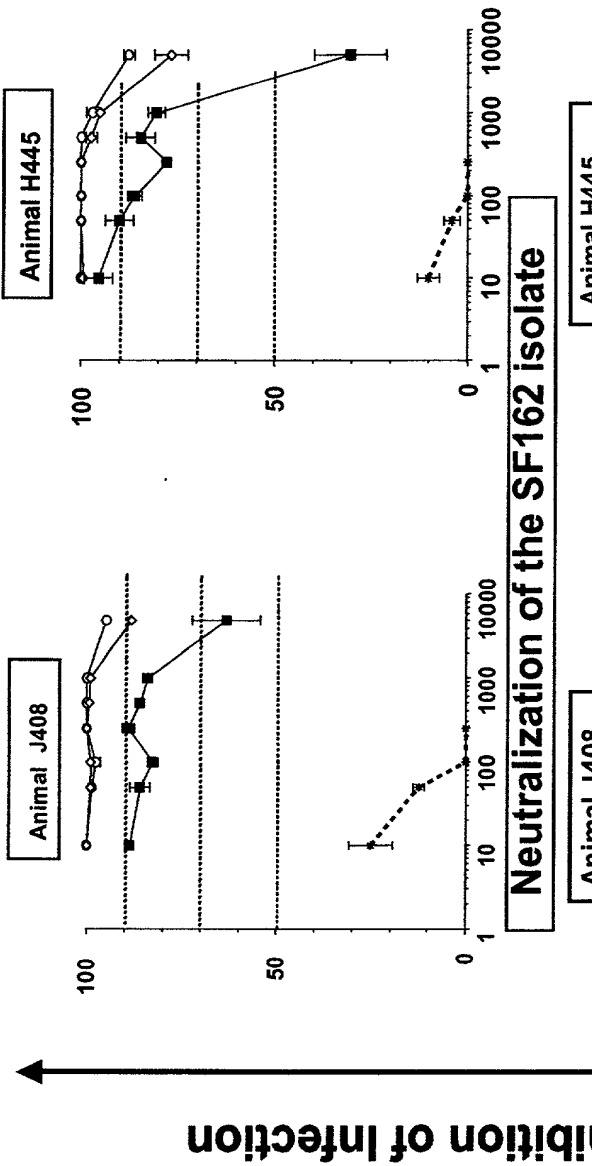


2570-1-001N FIGURE 11A

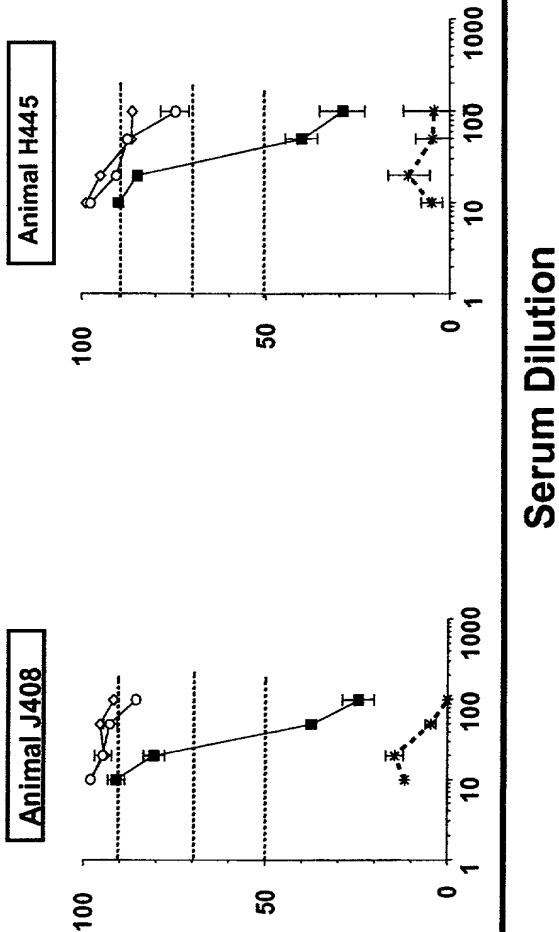


2570-1-001N FIGURE 11B

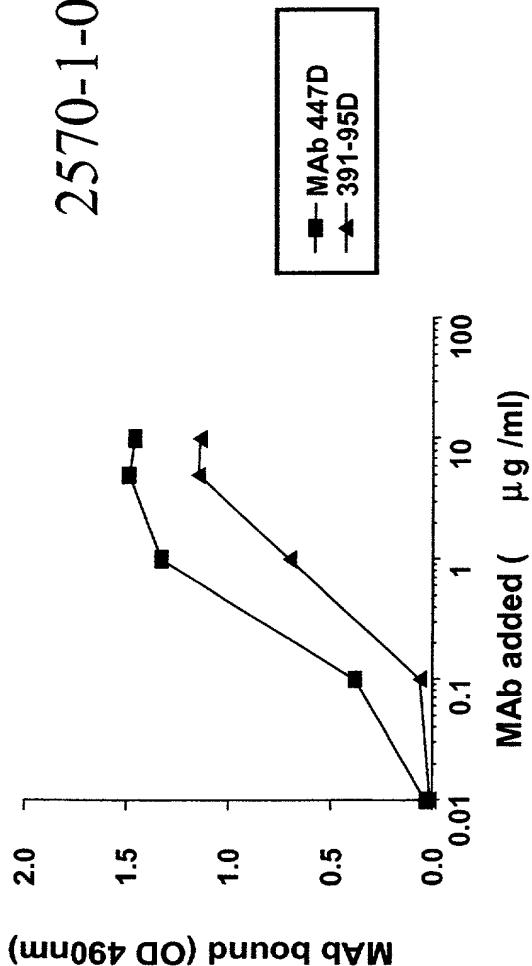
Neutralization of the SF162ΔV2 isolate



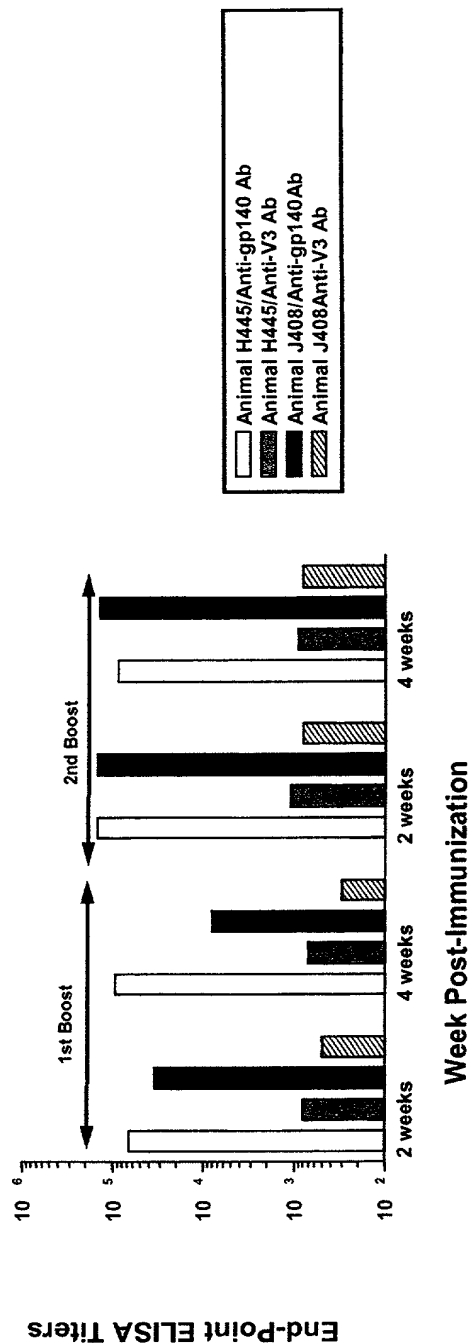
Neutralization of the SF162 isolate



(A) Binding of Anti-V3 loop MAbs to the SF162 Δ V2-derived V3 loop peptide



(B) Binding of macaque serum antibodies to the Δ V2gp140 protein and the corresponding V3 loop peptide



2570-1-001N FIGURE 13A

Neutralization of clade A, E and D HIV-1 viruses from sera collected from animal H445

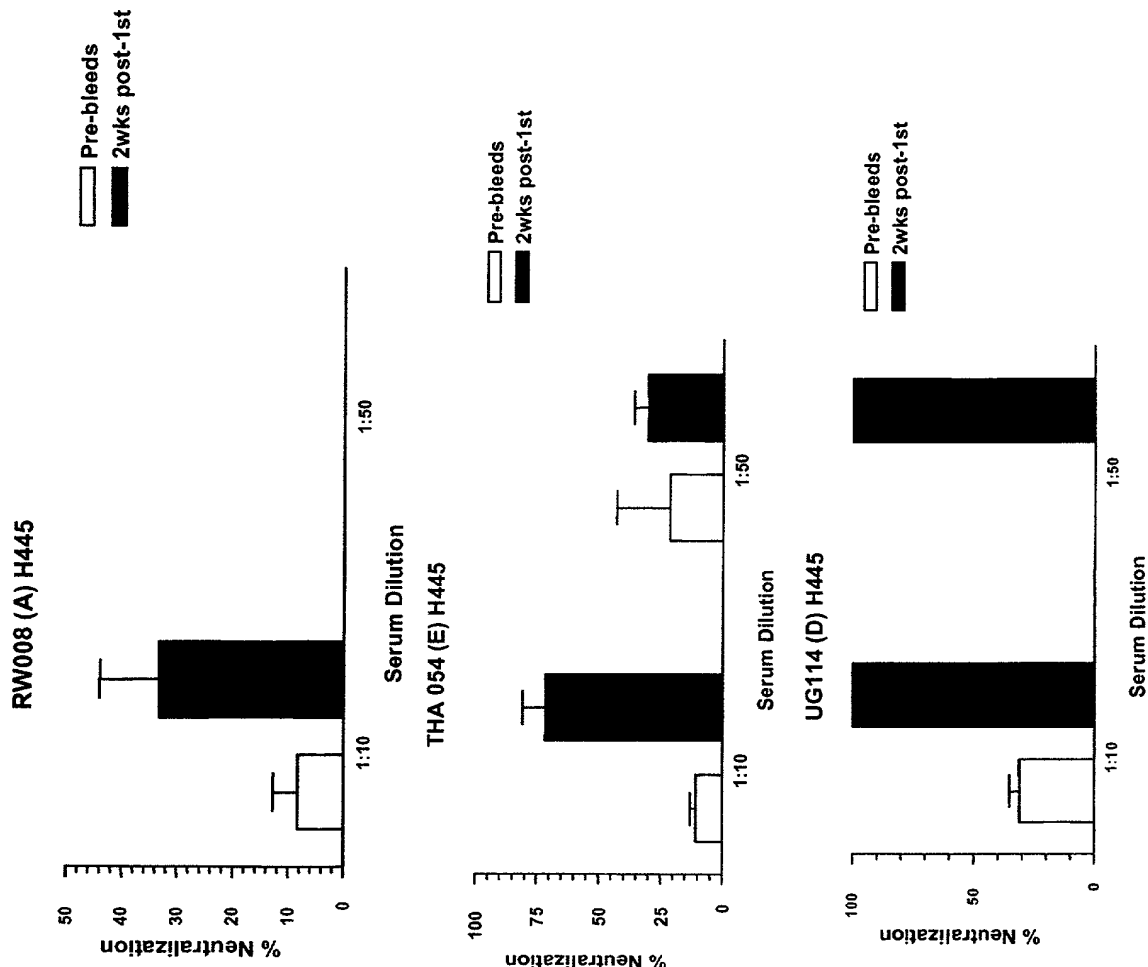
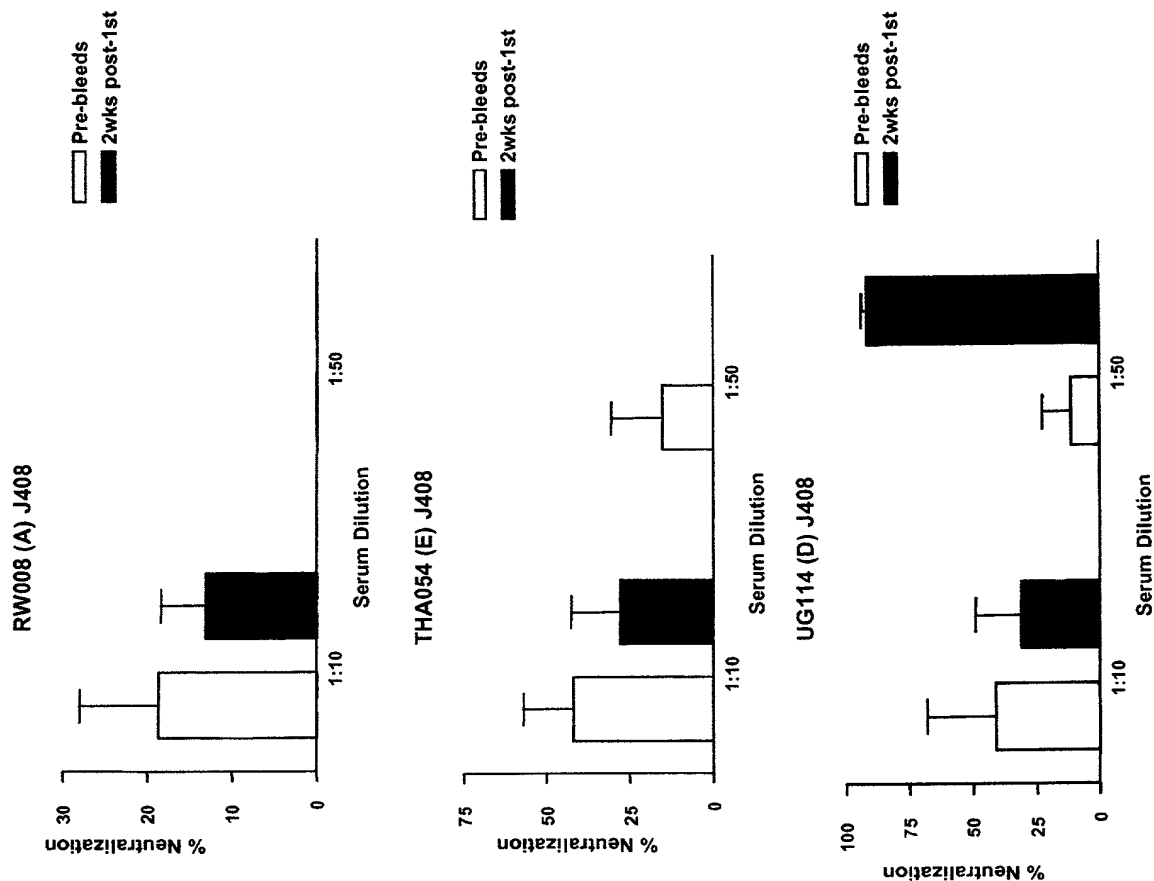


FIGURE 13B

Neutralization of clade A, E and D HIV-1 isolates
from sera collected from animal J408



2570-1-001N FIGURE 14

atgagagtg aaggggatca ggaagaatta tcagcacttg tggagagggg gcaccttgct
 ccttgggatg ttgatgatct gtagtgctgt agaaaaattg tgggtcacag tctattatgg
 ggtacctgtg tggaaagaag caaccaccac tctattttgt gcatcagatg ctaaagccta
 tgacacagag gtacataatg tctgggccac acatgcctgt gtaccacag acctaacc
 acaagaaaata gtattggaat atgtgacaga aaattttaac atgtgaaaaa ataacatggt
 agaacagatg catgaggata taatcagttt atgggatcaa agtctaaagc catgtgtaaa
 gtttaacccca ctctgtgtta ctctacattg cactaatttg aagaatgcta ctaataccaa
 gagttagtaat tggaaagaga tggacagagg agaaataaaa aattgctctt tcaaggtc

-GGA-GCT-GGA-

aa attgataaat tgtaacacct cagtcattac
 acaggcctgt ccaaaggtat ccttgaacc aattcccata cattatttg cccggctgg
 ttttgcgatt cttaaagtga atgataagaa gttcaatgga tcaggaccat gtacaaatgt
 cagcacagta caatgtacac atggaattag gccagtagtg tcaactcaat tgctgttaaa
 tggcagtcta gcagaagaag gggtagtaat tagatctgaa aatttcacag acaatgctaa
 aactataata gtacagctga aggaatctgt agaaatlaat tgtacaagac ctaacaataa
 tacaagaaaa agtataacta taggaccggg gagagcattt tatgcaacag gagacataat
 aggagatata agacaagcac attgtaacat tagtggaaga aaatggaata acactttaaa
 acagatagtt acaaaattac aagcacaaat tgggaataaa acaatagctt ttaagcaatc
 ctacaggagg gaccagaaaa ttgtaatgca cagttttaat tgtggagggg aatttttcta
 ctgtaattca acacagcttt ttaatagtac ttggaataat actatagggc caaataacac
 taatggaaact atcacactcc catgcagaat aaaacaaaatt ataaacaggt ggcagggaagt
 aggaaaagca atgtatgccc ctccatcag aggacaaaatt agatgctcat caaatattac
 aggactgcta ttaacaagag atggtggtta agagatcagt aacaccaccg agatcttcag
 acctggaggt ggagatatga gggacaattg gagaagtga ttatataaat ataaagtagt
 aaaaattgag ccattaggag tagcaccac caaggcaaa agaaagagtgg tgcagagaga
 aaaaagagca gtgacgctag gagctatgtt ccttgggttc ttgggagcag caggaaagcac
 tatggggcga cggtcactga cgctgacggt acaggccaga caattattgt ctggtatagt
 gcaacagcag acaatttgc tgagagctat tgaggcgcaa cagcatctgt tgaactcac
 agtctggggc atcaagcagc tccaggcaag agtcctgggt gtggaaagat acctaaagga
 tcaacagctc ctagggtttt ggggtgtctc tggaaaactc atttgcacca ctgctgtgcc
 ttggaatgct agttggagta ataaatctct ggatcagatt tggaaataaca tgacctggat
 ggagtgggag agagaaaattg acaattacac aaacttaata tacaccttaa ttgaagaatc
 gcagaaccaa caagaaaaaga atgaacaaga attattagaa ttggataagt gggcaagttt
 gtggaattgg ttgacatat caaaatggct gtggtatata aaa

FIGURE 15

agtgctgt agaaaaattg tgggtcacag tctattatgg
 ggtacctgtg tggaaagaag caaccaccac tctattttgt gcatcagatg ctaaaagccta
 tgacacagag gtacataatg tctggggcac acatgacctgt gtaccacacag accctaaaccc
 acaagaaata gtattggaaa atgtgacaga aaatttttaac atgtggaaaa ataatcatggt
 agaacagatg catgaggata taatcagttt atgggatcaa agtctaaagc catgtgtataa
 gttaacccca ctctgtgtta ctctacattg cactaatgtg aagaattgt ctaataccaa
 gagtagtaat tggaaagaga tggacagagg agaaaaataa aattgtcttt tcaaggtc
 -GGA-GCT-GGA-
 aa attgataaat tgtaaacacct cagtcattac
 acaggcctgt ccaaagggtat cctttgaacc aattcccata cattattgt cccgggctgg
 ttttgcgatt ctaaagtgt atgataagaa gttcaatgga tcaggacctat gtacaaatgt
 cagcacagta caatgtacac atggaattag gccagtagtg tcaactcaat tgctgttaaa
 tggcagtcta gcagaagaag gggtagtaat tagatctgaa aatttcacag acaatgtctaa
 aactataata gtacagctga aggaatctgt agaaattaat tgtacaagac ctaacaataa
 tacaagaaaa agtataacta taggaccggg gagagcattt tatgcaacag gagacataat
 aggagatata agacaagcac attgtaacat tagtggagaa aatgggaata acactttaaa
 acagatagtt acaaaattac aagcaccaatt tgggaataaa acaatagtct ttaagcaatc
 ctgaggaggg gacccagaaa ttgtaagtca cagttttaat tgtggagggg aatttttcta
 ctgtaattca acacagcttt ttaatagtac ttggaataat actatagggc caataaacac
 taatggaact atcacactcc catgcagaat aaacaaaatt ataacagggt ggcaggaaagt
 aggaaaagca atgtatgccc ctccatcag aggacaaaatt agatgctcat caaatattac
 aggactgcta ttaacaagag atggtggtaa agagatcagt aacaccacog agatcttcag
 acctggaggt ggagatatga gggacaattg gagaagtga ttatataaat ataaagtagt
 aaaaattgag ccattaggag tagcaccac ccttggttc tgggagcag caggaaagcac
 aaaaagagca gtgacgctag gagctatgtt ccttggttc tgggagcag caggaaagcac
 tatggggca cggtcactga cgctgacgtt acaggccaga caattattgt ctggtatagt
 gcaacagcag aacaatttgc tgagagctat tgaggcgcaa cagcatctgt tgcaactcac
 agtctggggc atcaagcagc tccaggcaag agtcctggct gtggaaagat accctaaagga
 tcaacagctc ctagggattt ggggttgctc tggaaaactc atttgacca ctgctgtgccc
 ttggaatgct agttggagta ataaatctct ggatcagatt tggaaataaca tgacctggat
 ggagtgggag agagaaaattg acaattacac aaacttaata tacaccttaa ttgaagaatc
 gcagaaccaa caagaaaaaga atgaacaaga attattagaa ttggataagt gggcaagttt
 gtggaattgg tttgacatat caaatggct gtggtatata aaa

2570-1-001N FIGURE 16

Amino acid sequence of SF162AV2 gp140

MRVKGIRKNYQHLWRGGTLLGLMICS~~A~~VEKLWVTVYYG
VPVWKEATTTLFCASDAKAYDTEVHN~~V~~WATHACVPTDPNPQ
EIVLE~~N~~VTENFNMWKNMVEQM~~H~~EDIISLWDQSLKPCVKLT
PLCVTLHCTNLK~~N~~ATNTKSSNWKEMDRGEIK~~N~~CSFKV-GAG-
KLINCNTSVITQACPKVSFEPIPIHYCAPAGFAILKCNDKKFN
GSGPCTNVSTVQCTHGIRPVVSTQ~~L~~LLNGSLAEEGVVIRSEN~~F~~
TDNAKTIIVQLKESVEIN~~C~~TRPN~~N~~NTNRK~~S~~ITIGPGRAF~~Y~~ATGDI
IGDIRQAHC~~N~~ISGEKW~~N~~NTLKQIVTKLQAQFG~~N~~KTIVFKQSS
GGDPEIVMHSFNCGGEFFYC~~N~~STQLFNSTW~~N~~NTIGP~~N~~NTNG
TITLPCRIKQIINRWQEVGKAMYAPPIRGQIRCSS~~N~~ITGLLLTR
DGGKEIS~~N~~TTEIFRPGGDMRD~~N~~NRSELYKYKVVKIEPLGV
APTKAKRRVVQREKRAVTLGAMFLGFLGAAGSTMGARSL
TLTVQARQLLSGIVQQNNLLRAIEAQ~~Q~~HLLQLTVWGIKLQ
ARVLAVERYLKDQQLLGWGC~~S~~GKLICTTAVPWN~~A~~SWSNK
SLDQIW~~N~~NTWMEWEREIDNYTNLIYTLIE~~S~~QNQQQEKNE
QELLELDKWASLWNWFDISKWLWYIK

SAVEKLWVTVVYVG
VPVWKEATTTLFCASDAKAYDTEVHNVWATHACVPTDPNPQ
EIVLENVTENFNMWKNMVEQMHEDIISLWDQSLKPCVKLT
PLCVTLHCTNLKNA¹TNTKSSNW²KEMDRGEIKNCSFKV-GAG-
KLINCNTSVITQACP³KVSFEPIHYCAPAGFAILKCNDKKFN
GSGPCTNVSTVQCTHGIRPVVSTQLLNGSLAE⁴EGV⁵VIRSEN⁶F
TDNAKTHIVQLKESVEINCTRPNN⁷TRKSITIGPGRAFYATGDI
IGDIRQAHCNISGEKW⁸NNTLKQIVTKLQAQFGNKTIVFKQSS
GGDPEIVMHSFNCGGEFFYC⁹NSTQLFNSTWN¹⁰TIGPN¹¹TNG
TTTLPCR¹²IKQI¹³NRWQEVGKAMYAPP¹⁴IRGQIRCSS¹⁵ITGLLLTR
DGGKEISNTTEIFRPGGDMRD¹⁶NWRSELYKYKVVKIEPLGV
APT¹⁷KAKRRV¹⁸VQREKRAVTLGAMFLGFLGAAGSTMGARSL
TLTVQARQLLSGIVQQQNNLLRAIEAQ¹⁹QHLLQLTVWGIKLQ
ARVLAVERYLKDQQLGIWGCSGK²⁰LICTTAVPWNASWSNK
SLDQIWN²¹MTWMEWEREIDNYTNLIYTLIEESQN²²QEKNE
QELLELDK²³WASLWNWFDISKWLWYIK